

PIEZOELECTRIC CERAMIC COMPOSITION AND METHOD OF
PRODUCTION OF SAME, PIEZOELECTRIC ELEMENT, AND
DIELECTRIC ELEMENT

ABSTRACT OF THE DISCLOSURE

A piezoelectric ceramic composition not containing lead, able to be sintered at ordinary pressure, and superior to the past in at least one of the properties unique to piezoelectric ceramic compositions such as the piezoelectric d_{31} constant, that is, a piezoelectric ceramic composition having a compound of a general formula $\{Li_x(K_{1-y}Na_y)_{1-x}\}(Nb_{1-z-w}Ta_zSb_w)O_3$, where x , y , z , and w are in the ranges of $0 \leq x \leq 0.2$, $0 \leq y \leq 1$, $0 < z \leq 0.4$, and $0 < w \leq 0.2$ as a main ingredient, where the piezoelectric ceramic composition contains at least one metal element selected from (1) palladium, silver, gold, ruthenium, rhodium, rhenium, osmium, iridium, and platinum, (2) nickel, iron, manganese, copper, and zinc, or (3) magnesium, calcium, strontium, and barium as an added element, and a method of production of the same and a piezoelectric element and dielectric element utilizing that piezoelectric ceramic composition.